
Actions
and
Funding Mechanisms

for
CURBING POLLUTION
and
ENVIRONMENTAL DEGRADATION

on
Local, State, National and International
Levels

a perspective from Vermont in 1989
cover prepared in August 1996

In 1996 most actions have yet to be implemented and are still very viable.

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1989

CONSERVATION/REGULATION

STATE ACTIONS

Significantly reduce energy consumption and locally generated pollution.

I. Enact legislation to:

- A. tax all non-residential parking spaces
 - suggest \$1/day/space starting in 1991
 - escalate tax to \$5/day/space by 1996
 - use tax to:
 - subsidize regular rail/bus/van service
 - encourage car pooling
 - computerized rider scheduling service
 - encourage walking/biking for short trips
 - Better trails/sidewalks/bike racks
- B. raise gasoline and diesel tax
 - increase as much as possible without high losses to cross border purchases
 - use tax to:
 - subsidize less polluting motor fuels such as propane
 - subsidize conversions to alternative fuels
- C. institute an odometer tax on gasoline and diesel powered vehicles
 - assess at time of annual inspection
 - suggest \$.0025/mile/1000 pounds of unladen vehicle weight starting in 1991
 - escalate tax to a penny/mile/1000 pounds by 1996
 - use tax to:
 - encourage telecommuting by:
 - identifying applications & appropriate technology
 - provide public courses
 - equip public agencies with networked computers and work stations
 - set up telecommuting from homes and satellite offices for government workers
 - subsidize improvements to telecommunications network
 - actively seek/create new local, national, and international telecommuting job opportunities
- D. eliminate the use of chlorofluorocarbons (CFCs)
 - assess tax on products based on amount of CFCs used
 - escalate tax annually
 - set deadline for halting sale of products containing CFCs
 - require proper disposal of products containing CFCs
 - use tax to:
 - set up authorized services to recapture CFCs from products prior to disposal
 - provide incentive reimbursements for properly disposing of CFCs

- E. institute luxury energy use taxes starting in 1991 - for example:
- on ski lift tickets: suggest 5% escalating to 20% in 1996
 - on snowmobile registrations: suggest additional \$20 annually escalating to \$50 annually by 1996
 - register and tax ATVs: same as snowmobiles
 - on motorized boat registrations: suggest \$1/hp/annually escalating to \$2.50/hp/annually by 1996
 - on motor home and camper registrations: suggest \$5/1000 pounds unladen weight escalating to \$20/1000 pounds in 1996
 - use tax to:
 - set up perpetual funding for comprehensive, integrated monitoring/study of air quality, water quality, and forest health, as well as complex aquatic and terrestrial ecosystems
- F. tax use of electricity
- suggest 1 cent per kwh starting in 1991
 - escalate tax to 2.5 cents per kwh by 1996
 - use tax to:
 - provide free energy audits and conservation recommendations to all energy users
 - provide updates and directories of energy efficient products and practices
 - subsidize energy conservation measures for low income households
 - evaluate and subsidize low/non-polluting, decentralized generation of electricity
 - demonstrate alternatives to herbicide use for woody vegetation control on rights-of-ways
- G. tax heating fuels
- starting in 1991 suggest:
 - 2 cents per gallon for oil
 - 1 cent per gallon for propane/natural gas
 - \$4 per ton for coal
 - wood exempt
 - escalate tax by 1996 to:
 - 10 cents per gallon for oil
 - 5 cents per gallon for propane/natural gas
 - \$20 per ton for coal
 - wood exempt
 - use tax to:
 - evaluate and subsidize:
 - energy conservation methods
 - passive & active solar heating
 - clean wood burning and handling technology including environmentally sound harvesting methods
 - assist low income households to install non-fossil fuel heating

- H. create a Vermont Environmental Corps
 - open to Vermont residents over 20 who meet qualifications
 - function would be to provide an added incentive for Vermonters to join volunteer programs such as the U.S. Peace Corps with volunteer projects designed to earn credits at a Vermont college
 - result would be returned volunteers with a deeper insight into local/global environment problems and solutions
- I. institute a state property tax on recreational properties and second homes
 - suggest starting in 1991 at 5% of locally assessed property tax escalating to 25% by 1996
 - use tax to:
 - fund the Use Value Appraisal program
- J. provide consistency from year to year and adequate administration of the Use Value Appraisal program

II. Study

- A. possible moratorium on construction/development with significant environmental/energy use impacts such as:
 - ski area expansion including snowmaking
 - highway construction/expansion
 - second home developments
- B. environmental policy, regulations, and actions of other states and nations - continually monitor
- C. regional and global trends in environmental damage or rehabilitation - continually monitor
- D. effects on motor vehicle use/energy consumption caused by centralizing services such as schools
 - evaluate regular bus routes and intertown cooperation on bussing
 - exchange tuition credits between towns to allow students to attend the closest school
 - student driving
 - after school programs and special functions

III. Encourage/promote

- A. travel packages to Vermont via rail and bus
- B. new ideas and enterprises located in Vermont which provide services or products which lessen human impact on the environment
 - offer special guidance and priority in obtaining permits and meeting government regulations
 - assist in obtaining patents or licensing agreements
 - provide tax incentives
- C. minimization/consolidation of privately and publicly sponsored meetings which require participants to travel
 - exchange ideas and directives via computer bulletin boards or networks
 - groups which must meet could schedule annual megameetings
- D. other states and the nation to adopt similar environmental legislation and action

NATIONAL ACTIONS

(duplicate or adapt actions suggested for Vermont where applicable)

Significantly reduce energy consumption and all forms of pollution particularly atmospheric pollution.

I. Enact legislation to:

- A. encourage the development of new non-polluting technology, methods, and products through goal achievement awards, rather than the government funding research and development in its normally wasteful fashion fraught with bureaucratic delays
 - intermediate and ultimate goals could be set with award amounts established according to the perceived urgency and difficulty of achievement
 - eligibility for the achievement awards would be wide open to world-wide competition and cooperation, spurring expeditious research and development
 - the U.S. could start such a program then other countries could be asked to join in to augment award amounts and to expand the scope of goals
 - if desired, the U.S. and other governments could recoup all or part of the award costs through partial rights to patent royalties
 - whether or not subject to royalties, all resulting patents should be available to any user thus fostering competition, further innovation, and rapid introduction
 - fund from:
 - cuts in military spending
 - specialized energy/pollution taxes

B. impose energy consumption taxes

- gasoline and diesel fuel tax
 - increase to bring prices into line with those paid in Europe by 1996
- use tax to:
 - fund goal achievement awards
 - for new low pollution/high efficiency internal combustion engines or replacement technology
 - for promising new concepts and technological breakthroughs in personal transportation, mass transit, freight handling
- tax on all aviation fuel
 - suggest starting at 5% in 1991 escalating to 25% in 1996
- use tax to:
 - fund goal/achievement awards for improvements in aircraft fuel efficiency/pollution reduction
 - improve air traffic control, reducing delays in takeoffs and landings
 - evaluate and consolidate flight schedules for maximum efficiency

C. reduce military spending

- suggest 5% starting in 1991 escalating to 25% in 1996
- use budget savings to:
 - fund goal achievement awards for new concepts and technology needed to protect/improve the environment
 - develop better international relations
 - greatly expand Peace Corps programs
 - form sub-agency such as "The Global Environmental Corps"
 - fund massive program to educate students and the general public about other cultures and environmental problems/solutions around the world
- fund national and international educational and publicity campaigns on the threat to the global environment caused by military preparations and hostile actions
- fund international disarmament efforts
- help compensate poorer countries which suffer when they support sanctions against rogue countries who do not comply with international arms control/reduction agreements
- assist the shift of military related enterprises and personnel to non-military production such as space technology, environmental protection, and mass transit equipment, etc.

- increase funding of space programs, particularly:
 - Earth environment/resource monitoring
 - closed, long duration life support systems and biospheres
 - increase funding for mass transit
 - reduce budget deficits which if left unpaid may critically restrict our future options in preventing or reacting to environmental disasters
- D. force immediate drastic reduction of all toxic emissions to the limits that technology allows and at the same time make government loans available for cleanup and improved technology
- in cases where there are debates whether or not the public or private sector pays or whether or not emissions in fact are a source of damaging pollution, loan repayments could be delayed until the issues are resolved and the decision is made on who pays
 - fund from cuts in military spending
- E. impose duties on all imported items which are produced by methods which do not meet the same environmental protection standards required for U.S. producers of similar items
- charge a duty of triple the economic advantage gained by shortcutting U.S. environmental standards
 - use about half the duty to cover the cost of administration and inspection - the other half could be held in escrow as an incentive refund to the foreign producers when they begin meeting U.S. standards
 - purpose of duty:
 - reduce legitimate complaints from U.S. producers of unfair foreign competition
 - make U.S. producers more willing to introduce environmental safeguards
 - encourage foreign producers and governments to improve environmental protection standards
- F. require on site treatment/disposal of pollutants whenever possible
- for example:
 - lower tall stacks to ground level
 - pollution damage is concentrated near source
 - cause and effect can be more easily seen
 - local public has a clearer perception of the problem and a greater stake in cleanup
 - long range transport greatly diminished
 - little mixing with pollutants from other sources
 - less opportunity for acid precipitation
 - less opportunity for photochemical reactions
 - recycling of industrial processing chemicals/waste water
 - tough waste disposal decisions faced by communities near the source of waste may lead to minimal waste production

III. Support passage of the following pending legislation:

- A. S.1610 "Global Climate Change Prevention Act of 1989"
 - forestry and agriculture research on impacts of global warming
 - mitigate global warming
 - incentives for tree planting
 - strong U.A. Forest Service role in international forestry activities

- B. S.324 "National Energy Policy Act of 1989"
 - establishes national energy policy to reduce carbon dioxide and trace gases
 - focuses on:
 - energy efficiency
 - fuel switching
 - conservation
 - reforestation
 - international development
 - population practices

- C. S.1611 " International Climate Change and Tropical Forestry Act of 1989" - PASSED
 - U.S. assistance to other nations to:
 - reduce greenhouse gases
 - reduce serious deforestation
 - address energy problems

RESEARCH/MONITORING

LOCAL/STATE/NATIONAL/INTERNATIONAL ACTIONS

Establish a coordinated, perpetual monitoring program to measure and study the condition of the environment.

We must try to better understand the relationships between natural and human-induced stresses. This can be done only by a comprehensive, perpetual, site-specific, and integrated monitoring programs. Climatological and meteorological data, and all known components of land, air, water, plant, and animal ecosystems should be monitored and studied.

- I. Establish a perpetual monitoring/study program in Vermont with federal assistance money and proceeds from a Vermont luxury energy use tax at state selected sites

II. Encourage other states, the federal government, governments of other countries, and international agencies to set up or expand environmental monitoring and study programs

A. coordinate monitoring programs

B. set up networks to share and analyze data

III. Encourage landowner participationⁱⁿ the forest health monitoring

A. Take-a-Plot program

B. establish and monitor forest health plots in conjunction with Use Value Appraisal plan preparation and updating

Advance studies and application of biological means to control forest insect pests.

An integrated approach must be taken toward controlling insect outbreaks: best management practices in the forests; limited, target control at peak outbreaks, with long-term restoration of biological balance. Accelerated research and tests are needed in most biological control relationships.

Accelerate genetic research to control forest diseases, develop resistant hybrids, and preserve threatened gene pools.

Individual trees differ greatly in their ability to withstand stress. Strong individuals may be key for the future forests of the world. Conversely, loss of certain resistant strains and varieties may mean permanent loss of biotic diversity and future, new uses of forest resources.

RESOURCE MANAGEMENT

STATE ACTIONS

Encourage forestland protection and management.

Protecting Vermont's environment while the state continues to develop will not be easy and it won't just happen. It needs to be planned. Otherwise, our forestland will continue to be lost to urbanization and subdivision.

I. Support the Use Value Appraisal program with funds generated by a second home/recreational property tax (please see earlier recommendation)

II. Continue support for local growth management efforts, such as through Act 200 (Growth Management Planning Act)

III. Clarify and strengthen Act 250 with regard to development of prime forestland

- IV. Structure use tax and fiscal policies to encourage sound management of forestland
- V. Encourage consideration of forestland and forest resources protection in town planning
 - A. identify on town tax maps:
 - U.V.A. parcels
 - B. identify on town planning maps:
 - critical habitats
 - ecologically sensitive areas
 - current land uses
 - allowed uses which maintain long-term health of environment

Enhance biological diversity as a way to improve the forest's ability to withstand stresses.

A forest with a mix of species and ages, managed to improve the vigor of individual trees, is far more able to withstand stress than one without such a mix or not so managed. Forestry practices that promote a species monoculture should be discouraged.

- I. Manage public lands to maintain and enhance biotic diversity
 - use public lands for demonstrations of managing for diversity
- II. Offer assistance programs to private landowners on management practices to enhance diversity
- III. Change emphasis of Use Value Appraisal program from primarily one of timber production to one which places ecosystem health and diversity first
- IV. Encourage the consideration of biotic diversity in town planning

Lessen impacts of forest harvesting.

Timber harvesting can have severe impacts on forest soils, water quality, tree health, timber quality, aesthetics, and resident wildlife. However proper equipment, skilled harvesting personnel, appropriate silvicultural methods, and timing can lessen the impacts and insure a stronger, healthier forest in the future.

- I. Follow up on recommendations of Timber Harvesting Study
- II. Encourage long-term research of timber harvesting impacts at a state level, such as now being done at Hubbard Brook, New Hampshire
- III. Continue promotion and enforcement of the "Acceptable Management Practices" law

- IV. Investigate the establishment of Scandinavian style training programs for forest harvesting personnel
 - certify trained personnel
 - elevate professional status of skilled forest workers
- V. Require least impact harvesting methods/equipment on public lands and U.V.A. parcels
 - A. develop economic/environmental guidelines for choosing methods/equipment
 - attempt to assign values for long-term environmental and timber quality damage to weigh against short-term economic advantages
 - B. publicize harvesting method/equipment alternatives to landowners and timber harvesting personnel
 - research new methods
 - demonstrate new methods
 - set up goal achievement awards to encourage forest workers and others to develop new methods/equipment

NATIONAL ACTIONS

(duplicate or adapt actions suggested for Vermont where applicable)

Encourage forestland protection and management.

- I. Require best management practices on currently producing or neglected timberlands
 - rehabilitate and withdraw lands from production if timber harvesting can not be conducted without long-term environmental damage
 - greatly intensify management on the most accessible, most productive, least environmentally sensitive sites, to boost the quantity and quality of timber produced from these areas
- II. Refrain from opening up access to new timberlands and/or continuing to log old growth forests unless it can be demonstrated that no long-term environmental damage will occur
 - assist in shifting displaced forest industry and workforce to the implementation of intensive, best forest management practices on currently producing or neglected timberlands
- III. Impose duty on forest product imports which are not produced under sustainable, best forest management practices
 - implement under the program of environmental duties suggested earlier

- IV. Impose penalty taxes on forest products produced in the U.S. which are not produced under sustainable, best forest management practices
- pattern tax after the environmental duty on imports
- V. Support international conservation efforts, including encouraging social and technological advances which enhance the environment
- A. support "debt for nature" swaps
 - B. revise international lending and aid policies
 - in project design give environmental impact an equal or greater weight than economic impact
 - push for economic and land reform changes to alleviate the plight of the landless poor and the damage they cause to the environment in their efforts to survive
 - push for governmental reform, withhold aid, and/or circumvent governments which are insensitive, corrupt, misdirected, or wasteful in the use of foreign aid
 - obligate secure long term funding for projects before they are initiated
 - expand micro-loan programs to the poor

EDUCATION/PLANNING

LOCAL/STATE/NATIONAL/INTERNATIONAL ACTIONS

Greatly expand efforts to communicate that concerns for forest health are embraced in a much larger concern for global environmental problems.

Global warming, elevated levels of ultraviolet radiation reaching the surface of the earth through a deteriorating ozone layer, acid deposition, rapid destruction of ecosystems by mushrooming human populations, and other global environmental ills are threatening not just our forests, but all natural systems. The human populace, from the local to the global level, must quickly become well informed and take decisive, correct, concerted action to halt and reverse massive environmental devastation.

- I. Pursue programs to make the public aware of global environmental issues and stewardship
- A. introduce environmental studies at all levels of public education
 - intensive course work
 - films, for example:
 - tapes of Educational TV programs
 - speakers
 - local projects
 - hands-on-projects, for example:
 - National Gardening Association's "Grow Lab"

- B. increase funding of televised environmental documentaries
- C. encourage radio and TV reporting of environmental developments as regularly as the value of the dollar and the stock market performances are now reported
- D. initiate international, citizen-to-citizen, citizen-to-government, government-to-citizen information networks on the environment via:
 - computer networking
 - video film exchanges
 - newsletters and other publications
- E. declare the 1990's "The Decade of the Environment"
- II. Strongly support and fund family planning
 - A. educate the public to the direct connection between human population growth and increasing environmental problems
 - B. make family planning information and services readily available in all countries
- III. Espouse the need for and practice personal and social lifestyle changes to reverse natural resource losses and degradation
- IV. Encourage fuel conservation, recycling, and other practices in schools, homes, businesses, and governments
- V. Incorporate environmental concerns into planning processes in all government agencies, not just those that have had traditional responsibilities for them
- VI. Encourage land use planning to preserve critical ecosystems, and environmental conditions which will sustain quality human existence for the indefinite future
- VII. Prepare
 - A. long range goals and plan of action needed for long term environmental stability
 - revise as situations and knowledge change
 - attempt to answer questions such as:
 - What level of human population can be supported?
 - How will the population be supported?
 - How can a sustainable population level be reached?
 - How can a sustainable life style be reached?